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patient, without class distinction, and consist of a private room with private toilet and bath and usually a small private veranda, and common lounge, dining and recreation rooms. Most of them are like good hotels in the standard of luxury provided.

In America, Wallace found the community attitude to old age, the numerous old people's classes and recreational centres, and the quantity of medical research on the ageing process commendable.

In his summary evaluation Wallace states that the best course would be to follow the British lead in setting aside wards, or at least beds, in the hospitals for acute illness and in appointing geriatric consultants to look after the ill geriatric patient; to have a definite break between hospitals and homes for the frail and needy old people (the homes to be no larger than 50-100 beds); and to increase the amount of medical research with the hope of being able to understand, and possibly to halt, the progress of the ageing process.

Charitable and church organizations could be of particular assistance by providing first-class homes of the type described, rather than by trying to build and maintain proper hospitals which would be beyond the financial ability of most private organizations.

PSILOCYBIN, ITS HISTORY AND PHARMACOLOGY

The effect of certain Mexican mushrooms in producing visions and hallucinations in human beings was described in the 16th century by a Franciscan monk.

A fascinating review of the history of knowledge concerning the mushroom *psilocybe mexicana* has recently been given by Cerletti of Basle, Switzerland (*Deutsche med. Wchnschr.*, 84: 2317, 1959). According to Cerletti, knowledge of this fungus was lost until it was re-discovered in 1953 by Wasson who with his wife, who is a physician, took part in ceremonies of tribes still using this "holy mushroom" for its intoxicating effects. Having obtained the mushrooms, he sent them to a French mycologist, Hime, who cultured them artificially and was able to extract the active drug. By 1958, the substance, which was named psilocybin, was extracted in crystalline form and was found to have the activity ascribed to the original mushroom. Cerletti describes the relationship between such tryptamines as serotonin and psilocybin and its derivative psilocin, and the latter's structural resemblance to lysergic acid-diethylamide. It was found in the Sandoz laboratories that the activity of the sympathetic nervous system is stimulated by psilocybin to a smaller degree than by lysergic acid-diethylamide. In contrast to such agents as serotonin, psilocybin regularly produces exaggeration of monosynaptic spinal reflexes. Its effect on the circulation is only slight; sometimes it causes mild hypertension but also occasionally hypotension. Its effect on isolated organs is also insignificant, with one exception, and that is its marked antagonistic action to that of serotonin on smooth muscle of the rat's uterus.

Systematic examination of its action on human subjects was carried out by volunteers in Basle during 1959, and results can be summarized as follows: Small doses of a few milligrams produce within 20 to 30 minutes both somatic and mental changes. The somatic effects are mainly neurovegetative, such as mydriasis, hyperreflexia, hypertension or hypotension, changed pulse frequency, etc. In small doses the drug produces a change in mood and in contact with the environment which is subjectively pleasant and consists of relaxation and detachment from the outside world. In higher doses, changes in orientation and psychosensory phenomena develop, such as visual hyperæsthesia, illusions and hallucinations. They are, however, not as frequent as those following lysergic acid-diethylamide and especially following mescaline.

Delay and co-workers have recently reported the therapeutic effect of psilocybin in a compulsion neurosis. It is known that similar observations have been made by other investigators, but it is too early to come to definite conclusions in this respect. There may be some advantages to therapy with this drug as compared with lysergic acid-diethylamide, whose prolonged action and consequent production of anxiety are a well-known deterrent to its widespread use. Cerletti expresses the hope that clinical investigation combined with biochemical clarification of the connection between psilocybin and endogenous metabolism of indol will succeed in removing the mystery from these small mushrooms with their traditional magic action.

W.G.

A NEW LOWER LIMB PROSTHESIS

Under the auspices of the department of orthopædic surgery of the University of Cape Town, Professor Lewer Allen has brought out a new form of lower limb prosthesis. He points out that existing prostheses produce an awkward gait involving much effort and discomfort. After several years' work he has produced an artificial limb with mechanisms which allow of a gait much closer to that of the normal. These mechanisms are enclosed in a light metal skeleton-like housing on which plastic foam and sorbo rubber are built.

Professor Allen's paper in the *South African Medical Journal*, February 13, 1960, must be consulted for details. It is felt that this prosthesis not only will be of great value in its present form, but will lead to further research and modifications.

The limb has been patented by the University of Cape Town but it has been arranged that no royalties will be drawn from the invention; even the research unit of Professor Allen's department of orthopædic surgery is foregoing any such profit, their desire being to protect the handicapped from any additional expense.